CLAIMS:

1. A compound having a structure selected from $X-R_n-A-Q_m-Y$, $R_n-X-A-Y-Q_m$, $R_n-X-A-Q_m-Y$ and $X-R_n-A-Y-Q_m$ wherein,
A is a single-stranded nucleic acid sequence, said single-stranded nucleic acid sequence being complementary to a pre-selected target sequence;
R is a photosensitive moiety such that upon irradiation with electromagnetic radiation having a wavelength corresponding to at least one absorption wavelength of R, R interacts through energy transfer with a molecule capable of producing free radicals, to produce free radicals;
Q is a moiety that quenches excited energy states of R;
X and Y are an affinity pair that interact to bring R and Q into close proximity in the absence of said target sequence thus enabling energy transfer between R and Q;
n and m are, independently, integers in the range 1-5;
and said compound optionally contains a linker moiety.

2. A compound according to claim 1, wherein R has an absorption wavelength of between 300 and 800nm.

3. A compound according to claim 1 or 2, wherein R is selected from the group consisting of chlorines, chorophylls, coumarines, cyanines, fullerenes, metallophthalocyanines, metalloporphyrins, methylenporphyrins, naphthalimides, naphthalocyanines, nile blue, perylenequinones, phenols, pheophoribes, pheophyrins, phthalocyanines, porphycenes, porphyrins, psoralens, purpurins, quinines, retinols, rhodamines, thiophenes, verdins, xanthenes and dimers, oligomers and derivatives thereof.

4. A compound according to any preceding claim, wherein Q is selected from the group consisting of a non-fluorescing dye, a fluorophore, a second photosensitizing moiety, a nano-scaled semiconducter or conductor and gold.

5. A compound according to claim 4, wherein the second photosensitizing moiety is different to R.

6. A compound according to any preceding claim, wherein X and Y are selected from the group consisting of complementary nucleic acid sequences, protein-ligand, antibody-antigen and protein-nucleic acid.

7. A compound according to any preceding claim, wherein the linker moiety is selected from the group consisting of linear or branched substituted or unsubstituted alkyl and linear or branched substituted or unsubstituted heteroalkyl groups.

8. A compound according to any preceding claim, wherein said molecule capable of producing free radicals is molecular oxygen.

9. A compound according to claim 8, wherein said free radicals are selected from the group consisting of singlet oxygen and reactive oxygen species.

10. A compound according to any preceding claim, wherein the compound is unimolecular.

11. A compound according to any preceding claim, wherein the compound is bimolecular.

12. A complex comprising a compound according to any of claims 1 to 11 bound to a carrier which increases the internalisation of said compound.

13. A complex according to claim 12, wherein said compound is bound to said carrier by electrostatic interaction.

14. A complex according to claim 13, wherein the carrier is a polycation.

15. A complex according to claim 14, wherein the polycation is a histone or polylysine.

16. A complex according to claim 12, wherein said compound is bound to said carrier by covalent interaction.

17. A complex according to claim 16, wherein the carrier is a protein or peptide.

18. A complex according to claim 17, wherein the protein is an antibody, an antibody fragment, or a cholesterin.

19. A complex according to any of claims 12 to 18, wherein the carrier targets a specific cell surface protein.

20. A complex according to claim 19, wherein the cell surface protein is selected from the group consisting of a low-density lipoprotein receptor, an endothelial growth factor receptor, a fibroblast growth factor receptor, an integrin, an insulin receptor, an epidermal growth factor receptor and a transferrin receptor.

21. A complex according to any of claims 12 to 20, wherein the complex is encapsulated in a lipid mixture, said lipid mixture comprising at least two members independently selected from the group consisting of phospholipids, sterols and cationic lipids.

22. A complex according to claim 21, wherein the lipid mixture is in the form of liposomes.

23. A complex according to claim 22, wherein the liposomes are from about 50 to 150 nm in diameter.

24. A compound according to any of claims 1 to 11 or a complex according to any of claims 12 to 23, wherein said compound or complex is associated with at least one pharmaceutically acceptable carrier or excipient.

25. A compound or complex according to any preceding claim for use as a medicament for killing cells by photochemotherapy.

26. A compound or complex according to claim 25, wherein said cells are prokaryotic or eukaryotic.

27. A compound or complex according to claim 25, wherein said compound is administered topically, orally or systemically.

28. Use of a compound or complex according to any of claims 25 to 27, wherein said cells are involved in neovascularizton, age related macular degeneration, diabetic retinopathy, artheritis and cancer.

29. Use of a compound or a complex according to any preceding claim, in the preparation of a composition for use in cosmetic treatments.

30. A method of killing cells by photochemotherapy comprising the steps:

(i) incubating the target cells with an effective amount of a compound or a complex according to any preceding claim;

(ii) allowing sufficient time for the compound to hybridise to a target nucleic acid sequence within the cells; and

(iii) irradiation of the target cells with electromagnetic radiation of a wavelength that corresponds to at least one absorption wavelength of the photosensitive moiety R such that R interacts through energy transfer with a molecule capable of producing free radicals, to produce free radicals.

31. A method according to claim 30, wherein said molecule capable of producing free radicals is molecular oxygen.

32. A method according to claim 31, wherein said free radicals are selected from the group consisting of singlet oxygen and reactive oxygen species.

33. A method according to any of claims 30 to 32, wherein irradiation with electromagnetic radiation is performed within between 1 minute and 168 hours after incubation with the compound or complex.

34. A method according to any of claims 30 to 33, wherein the total fluence of electromagnetic radiation used for irradiation is between 2 J/cm^2 and 500 J/cm^2.

35. A kit for preparing a compound according to any of claims 1 to 11 comprising

(a) one or more affinity pairs;

(b) one or more photosensitizing and quenching moieties; and

(c) one or more target complement sequences.

36. A kit comprising

(a) a compound according to any of claims 1 to 11;

(b) at least one pharmaceutically acceptable carrier or excipient; and/or

(c) at least one cell surface penetrating assisting agent.